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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/705,930

11/13/2003

Hans-Detlef Leppert

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EXAMINER

DEGHAN, QUEENIE S

ART UNIT

PAPER NUMBER

1731

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

03/19/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/705,930

Applicant(s)

LEPPERT, HANS-DETLEF

Examiner

Queenie Dehghan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) 6 and 7 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claim 1 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. It is not clear where in the specification is support for "reducing OH-content in the fiber drawing device when drawing of the optical fiber there through" is present. If the Examiner has erred, please point out specifically the page and line numbers for the support.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blankenship et al. (5,059,229) in view of Schneider (Derwent abstract of DE

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2843333) and Lemaire et al. (EP 0673895). Blankenship et al. disclose a method for fabricating an optical fiber comprising;

- a. Providing a fiber drawing device (figure 4, col. 4 lines 41-42);
- b. Introducing a preform into the fiber drawing device, the preform includes silica doped with germanium (col. 8 lines 5-7, col. 6 lines 51-60, col. 2 lines 25-26);
- c. Injecting hydrogen gas mixture including helium into the fiber drawing device during drawing, to reduce OH-content in the fiber drawing device when drawing of the optical fiber there through (col. 4 lines 36-47, col. 5 lines 16-17, 24-36, col. 1 lines 7-12)

Blankenship et al. only specifically disclose the use of a hydrogen gas mixture and not deuterium. However, one skilled in the art is familiar with the interchangeability of hydrogen with deuterium, as exemplified by the applicant's disclosure in page 2, last paragraph. Similarly, Lemaire et al. demonstrates the use of deuterium instead of hydrogen for manufacturing optical fiber from a germanium doped silica preform (page 2 lines 25-32, page 3 line 3). Additionally, Schneider teaches the use of deuterium gas during drawing of a fiber. It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize deuterium instead of hydrogen in the gas mixture during the drawing process of Blankenship et al., because deuterium allows for a lower rate of loss increase when later exposed to hydrogen environments and retains a high transmission of light in the 1.55 and 1.31 μm wavelength regions, as taught by Lemaire et al.

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3. Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blankenship et al. (5,059,229) in view of Schneider (Derwent abstract of DE 2843333) and Lemaire et al. (EP 0673895), applied to claim 1 above, in further view of Campion et al. (EP 1 182 176) and Zeng et al. (2003/0159468). Schneider fails to disclose a deuterium gas mixture. Campion et al. teach treating optical fibers with a deuterium gas mixture comprising nitrogen, wherein the concentration of deuterium is 1% ([0014], [0015], [0031]). It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the deuterium gas mixture in nitrogen of Campion et al. in the process of Blankenship et al, Schneider, and Lemaire et al. to reduce cost of the deuterium used for the treatment, as suggested by Campion. However, Campion et al. do not disclose a gas mixture comprising deuterium and helium. Zeng et al. teach using deuterium gas to treat an optical fiber deposition tube, wherein the deuterium gas is present in a mixture comprising an inert gas, such as nitrogen or helium ([0025]). It would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the nitrogen gas in Campion et al. 1% deuterium gas mixture with helium, as taught by Zeng et al. for use in the process of Blankenship et al., Schneider, and Lemaire et al. due to the ample availability of both nitrogen or helium gases as well as their inert characteristics. Furthermore, keeping the deuterium concentration to 1% would minimize the cost for the treatment step.

Response to Arguments

4. Applicant's arguments with respect to claims 1 and 5 have been considered but are moot in view of the new ground(s) of rejection.

5. Furthermore, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., Schneider does not address the preservation of dangling bonds at defect centers) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). In addition, in regards to the use of other suggested gases by Schneider, Schneider disclose the use of one of the gases. Schneider was used to teach the use of deuterium during fiber drawing.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Queenie Dehghan whose telephone number is (571)272-8209. The examiner can normally be reached on Monday through Friday 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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